ABSTRACT OF THE DISCLOSURE

Interferometric two-dimensional displacement measuring system

A measuring system for an apparatus having a bed, a first stage movable in a first direction relative to the bed, and a second stage movable in a second direction at right angles to the first direction, relative to the first stage. A first interferometer measures displacement in the first direction between a first reference reflector and a first target reflector fixed to the first stage. A second interferometer (a) measures displacement in the second direction between a second reference reflector and a second target reflector fixed to the second stage, (b) includes an intermediate reflector fixed to the first stage, (c) produces a beam that extends in the first direction from a position fixed to the bed to the intermediate reflector and in the second direction from the intermediate reflector to the second target reflector and (d) can therefore have a head that is mounted on the bed.